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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,003	12/03/2003	Juanita M. Cassidy	2002-IP-008502U1	4501
71407	7590	01/28/2008		
ROBERT A. KENT P.O. BOX 1431 DUNCAN, OK 73536			EXAMINER CONLEY, SEAN EVERETT	
			ART UNIT	PAPER NUMBER
			1797	
			NOTIFICATION DATE	DELIVERY MODE
			01/28/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

**Application No.**

10/727,003

**Applicant(s)**

CASSIDY ET AL.

**Examiner**

Sean E. Conley

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/13/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 25-33 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/3/03, 10/2/07, 4/19/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of cuprous iodide from species group D in the reply filed on November 13, 2007 is acknowledged. Claims 1-12 and 25-32 remain pending with claim 12 being withdrawn from consideration for being directed to a non-elected species.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-11 and 26-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker (U.S. Patent No. 5,366,643).

With respect to claims 1 and 32, Walker discloses a method of inhibiting corrosion of a metal surface contacted by an aqueous acid solution comprising: combining a corrosion inhibiting composition with the aqueous acid solution and contacting the metal surface, such as a metal surface in a subterranean formation, with the aqueous acid solution containing the corrosion inhibiting composition (see col. 1, lines 15-20). The corrosion inhibiting composition comprises the reaction product of an alpha,beta-unsaturated aldehyde with a primary or secondary amine (see col. 2, lines 30-67; see examples I-IV).

With respect to claim 3, Walker discloses that the metal surface comprises N-80 steel (see examples I-IV).

With respect to claim 4, Walker discloses that the alpha,beta-unsaturated aldehyde comprises cinnamaldehyde (see col. 5, lines 57-66).

With respect to claim 5, Walker discloses that the primary or secondary amine comprises ethanolamine (see table III).

With respect to claim 6, Walker discloses that the reaction product results from a reaction of the primary or secondary amine with the alpha,beta-unsaturated aldehyde at a molar ratio of amine to aldehyde or ketone in the range of from about 0.1:1 to about 4:1. Specifically, Walker discloses 0.3 moles of ethanolamine and 0.66 moles of an aldehyde which fall within the claimed ratio (see example I and tables I-V).

With respect to claim 7, Walker discloses that the corrosion inhibiting composition is combined with the aqueous acid solution in an amount in the range of from about 0.01% to about 5% by weight of the aqueous acid fluid. Specifically, Walker discloses that the inhibitor composition is present in an amount from about 1 to about 20 gallons per 1000 gallons of aqueous acidic solution which falls within the claim range (see col. 8, lines 20-35).

With respect to claim 8, Walker discloses that the corrosion inhibiting composition further comprises a solvent or a surfactant (see col. 7, lines 40-60).

With respect to claims 9 and 10, Walker discloses that that the aqueous acid solution is 15% hydrochloric acid. It is well known that a 15% solution of hydrochloric

acid means that the solution is 15% hydrochloric acid and the remainder is water (see examples I-IV).

With respect to claims 11 and 25, Walker discloses in the examples that the metal coupon is exposed to the aqueous acid solution at temperatures of about 300°F, wherein the hydrochloric acid is at a concentration of about 15% by weight of the solution (see example I; see column 9).

With respect to claims 26-31, Walker discloses that the corrosion inhibiting composition may further comprise acetylenic alcohol (see col. 7, lines 1-24), carbonyl compounds (see col. 5, lines 10-25), and formamide (see table IV).

### ***Allowable Subject Matter***

3. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art, alone or in combination, fails to teach or fairly suggest the step of separately adding the alpha,beta-unsaturated aldehyde or ketone and the primary or secondary amine to water used to form the aqueous acid solution, wherein the alpha,beta-unsaturated aldehyde or ketone and the primary or secondary amine react to form the reaction product used in the method of claim 1.

The closest prior art is Walker (U.S. Patent No. 5,366,643). Walker is set forth in the above rejection. The method of Walker discloses that the components used to form

the reaction product of the corrosion inhibitor may be added in any order to a reaction vessel (see example I). However, Walker does not disclose or suggest separately adding the alpha,beta-unsaturated aldehyde or ketone and the primary or secondary amine to water used to form the aqueous acid solution.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Conley whose telephone number is 571-272-8414. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sean E. Conley

January 11, 2008